

SILAG-BUTIR IRRIGATION SYSTEM

The ricefields served by the Silag-Butir system are located in the adjoining barrios of Silag, Butir, Pacang, and Cabaruan. All these barrios are in the municipality of Sta. Maria in Ilocos Sur. From the town proper, Cabaruan is the most accessible as it is only about 1.5 kilometers away. The other three barrios are also close to the town proper (the farthest is only about 4 kilometers away) but public transportation vehicles can reach them only during the dry months. During the rainy months, the river that is crossed by the road leading to Silag becomes swollen; hence during this period, the vehicles stop at Cabaruan and one has to take the raft that ferries people across the river. Then at the other side, one has to hike to the other three barrios served by the system.

The System's Fields

During the wet season, the Silag-Butir system irrigates about 115 hectares of riceland cultivated by about 300 farmers. During the dry season, however, the system can serve only about 38 hectares. Moreover, farmers report that there had been dry periods when the system did not function at all because the system's water source dried up.

The size of the fields tilled by individual farmers in this system ranges from 50 square meters to 1 hectare, or an average of about 0.5 hectare. During the wet season, the crop cultivated in this system is rice, but during the dry season, the farmers grow tobacco. The rice crop is usually planted in June, July, or August and harvested in October, November, or December.

Technical Aspects of the System

Water supply

The present water source of the Silag-Butir system is the Silag Creek.¹ The creek's water is relatively abundant only during the rainy

¹This creek runs parallel to Pacang Creek which, in the past, was also used by the system as irrigation source; it is now dry.

months (June to October); during the dry months the creek dries up rapidly.² Thus, during the dry season, the farmers irrigate their tobacco crop with water from the springs found in the area. The association, as a group, usually hires a pump to draw the water of the springs, but some farmers in the system have acquired pumps for their exclusive use.

The incumbent president of the system's association claims that the Silag-Butir farmers hold a permit for the use of the water of Silag Creek, but he could not locate the document. In his possession, however, are the association's application for a water-right permit addressed to the Bureau of Public Works in Sudipen, La Union dated 18 August 1959 and the statement of Claim and Title for the use of water of Silag Creek dated 7 July 1959.

The physical structures

According to our informants, the Silag-Butir system came into existence in late 1800s. The location of the dam has not been changed, but the dam's condition has been improved. The original brush dam has now been replaced by a cement-grouted stone riprap dam. A large portion of the funds used for the construction of the present dam was given by the Presidential Arm on Community Development (PACD), and a small portion came from donations of the landowners of fields in the system. The farmer-cultivators provided the labor in the construction, while the local NIA personnel supervised the construction job.

The system's headgate (located about 200 meters from the dam) is also made of cement-grouted stone riprap. The cement used in building the headgate was also provided by the PACD. The system's main canal is a little more than 3.5 kilometers long. About 50 meters of one side of the main canal is lined with cement-grouted stone riprap. (The cement used here was provided by the NIA.) There are two subcanals which branch from the main canal. One of the subcanals is about 70 meters long; the other is 130 meters long. The whole length of both subcanals is earthen. The only permanent structure in the system is a cement culvert which is located at the point where the canal crosses the barrio road.

²NIA reports that in September 1977, the discharge flow at the creek was 2,000 lit./sec. while at the system's main canal it was 200 lit./sec. Farmers claim that the rapid decrease of water in the creek at the area where the system's dam is located is caused by four privately-owned-systems. These systems are Bulbullagaw (used by four farmers), Manilang (used by six farmers), Pakrido (used by eight farmers), and Bantay Pudot (used by two farmers).

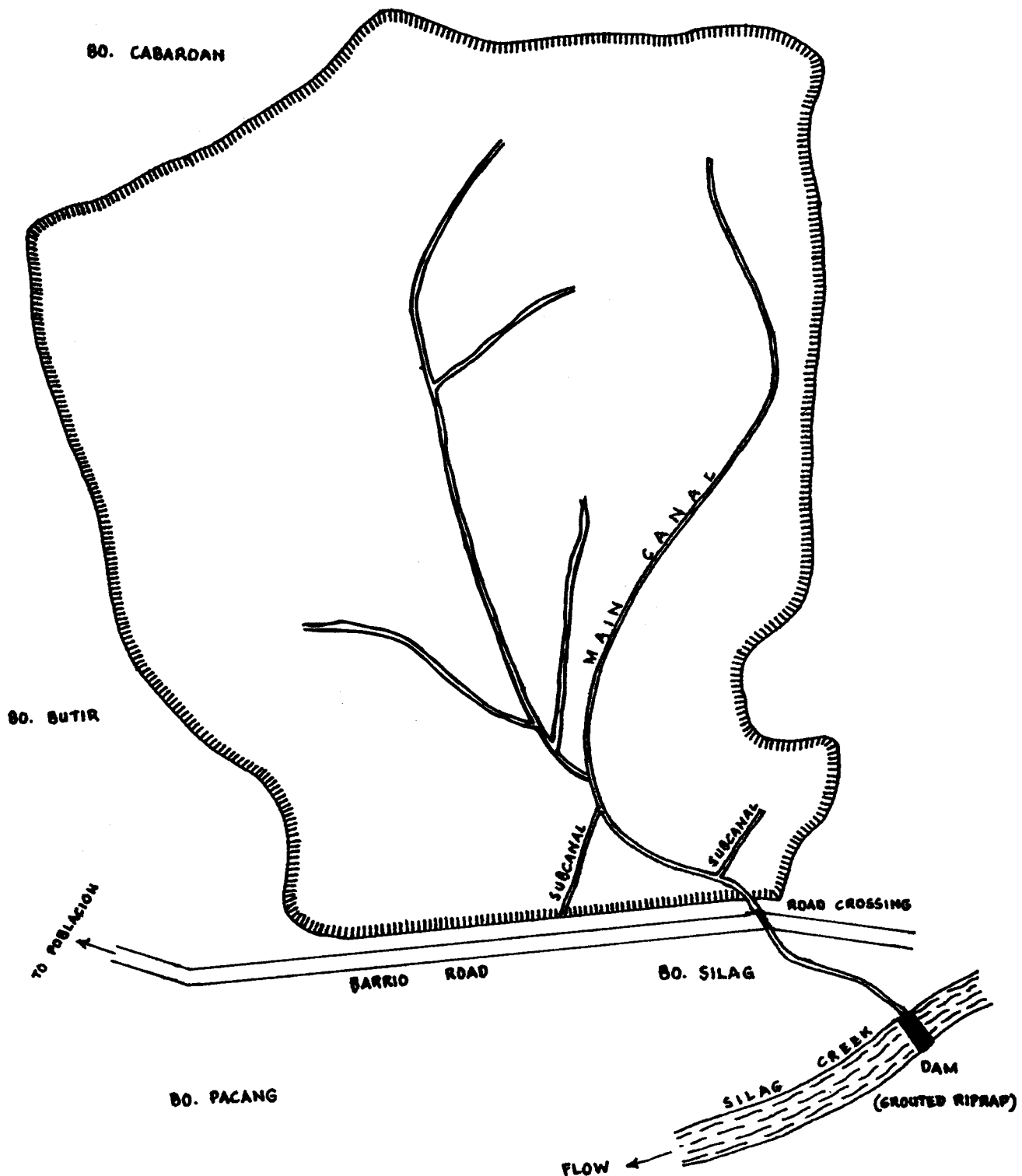


Figure 1. Layout of the Silag-Butir irrigation system

There are about 72 take-off points made of bamboo tubes along the system's canals--about 65 on the main canal, six on the long subcanal, and one on the short subcanal. Hence, during the wet season, an average of four farmers derive water from one take-off point.

Management of the System

The Silag-Butir system is currently managed by the Silag-Butir Irrigation System Association.³ The association had its beginnings in the early 1900s when, after the farmers had repaired the system's damaged dam, the landowners of the system's fields appointed a group of farmers who would look after the condition of the system's dam and canals. Until the early fifties, the leadership in the system was inherited by the children of the earlier leaders. It was only in the late fifties, when a government agency organized the farmers into a formal association, that the leadership positions in the system became elective. Since then, the association has had only three other elections: in 1963, in 1967, and in 1970. Our informants report that the elections had been infrequent since the chosen leaders are usually not replaced until they decline the positions because of too much farm work or they commit grievous mistakes.⁴ Thus the majority of the incumbent officials have been leaders of the association since the early fifties. However, they have not held the same positions through the years. Rather, they occupied different positions in the association.

The president claims that the association was registered with the Securities and Exchange Commission in 1959 but he could not tell the exact date nor could he locate the registration papers. The association's constitution and bylaws date back to 1918, but the present constitution include amendments made in October 1972, specifically the amendments done in compliance with the NIA requirements.

At present, the association has about 300 regular members. These members pay an irrigation fee of one bundle (bettek) of palay for every 2 cans of palay planted per cropping.⁵ In addition to the regular

³The earlier name of the association was Bitalag Irrigators' Association.

⁴Our informants claim that throughout the association's history, the farmers have removed from office and brought to court only one official. This official malversed the association funds.

⁵This fee amounts to 2 cans or about 0.5 cavans of palay per hectare.

members, the association has 35 special members. Unfortunately, we were not able to determine how the system of special membership came about. We only know that the special members are not required to pay the irrigation fees nor are they to contribute labor in system maintenance, but they are allowed to use the system's water during the wet season.

The management responsibilities of the system rest on the association's board of directors composed of the president, the vice-president, the secretary, the treasurer, and six board members. The first four officials are elected by the association members while the board members are appointed by the association president. The board members are composed of a chairman and five members. These persons serve as water distributors or *babaonen* (literally, one who is ordered around or sent on errands) particularly during the rotational distribution of irrigation. Aside from these officials, the association has a gatekeeper, whose main task is to see to it that no obstruction gets into the main canal, and more important, to close the system's headgate when the current in the creek becomes strong. The present gatekeeper is the son of the association president.

All of the association officials and the gatekeeper are not paid but they are exempted from paying their irrigation fees and other payments which maybe required by the association. Moreover, when the farmers obtain a good harvest, each of the six board members may receive 10 bundles of palay which are taken from the irrigation-fee payments.

The association officials meet as a group as often as the need arises and they also meet with the association members when required. Specifically, the general assembly meetings are held when there is a need to discuss the rotation of water use and when there are repair and maintenance jobs to be undertaken. In 1977, the association convened three general assembly meetings which were attended by the majority (90 percent or more) of the members.

Water allocation and distribution

As in many other Philippine gravity systems, when water is abundant in this system, irrigation is distributed continuously and anybody (that is, including the special members and even nonmembers) can use the system's water.⁶ When the water supply of the system decreases, however, the water is distributed by rotation (*barsak*). For the rotational distribution, the system's field area is divided into four

⁶When farmers who are not members of the association are able to use the system's water, they have to pay an irrigation fee at a rate similar to the members. Unfortunately, we were not able to determine the number of nonassociation members who can utilize the system's water and the conditions when they are allowed to do so.

districts and each district is given the exclusive use of water for 2 to 3 days, depending upon the available water supply and the water needs of a district. The hectarage and the number of farmers in each district are listed below.

<u>District</u>	<u>Area</u> (in hectares)	<u>No. of</u> <u>farmers</u>
I. Caleddaan (grassland area)	25	69
II. Cadanglaan (wooded area)	36	85
III. Sapuyot-Ubbong (swampy area)	28	77
IV. Caturoddan (elevated area)	<u>25</u>	<u>69</u>
Total	114	300

With regard to priorities in the use of water, our informants claim that the fields at the elevated area (Caturoddan) usually get the priority because this area immediately experiences water scarcity when the system's water supply decreases. The other rule observed during the rotation of water is that farmers are not allowed to construct farm ditches to divert water from the major canals toward their fields.

Maintenance of the system

The maintenance of the system is the responsibility of the association's regular members, under the supervision of the association officials. However, the association officials have not instituted a schedule for system maintenance. Rather, they call for the repair and cleaning of the system whenever there is a need for it.

The existing association rule on maintenance participation is that a farmer who cannot personally attend a maintenance activity should send his representative. Otherwise, the farmer has to pay a fine: 1/2 can of palay for a day of absence. The fines imposed on absences from maintenance activities are collected at harvest time and usually the fines are adjusted according to the harvest of the offender. While the fines are not immediately collected and the fee may be reduced, the collection at harvest time is strictly enforced.⁷

⁷The association has also instituted fines on other offenses such as water stealing, wasting of water, and allowing animals in the rice-field area during harvest time. While the fine for an offense has been fixed, most of the time the association officials reduce the fines. They

Farmers who fail to meet their obligations at harvest time are warned that they would be subsequently deprived of water. Our informants claim that the association has used water deprivation to compel farmers to remit both the due fines and irrigation-fee payments.

There are maintenance jobs in the system that are not undertaken by the farmers themselves. For example, in the cementing of a portion of the system's main canal, the association hired skilled workers who were each paid ₱15 per day.

Conflict and conflict management

The association officials claim that before the imposition of martial law, the conflicts between the officials and some members of the association were often generated by the interference of the local politicians with association affairs. For instance, in 1970 when the president could not solicit funds for cementing the system's main canal, some of the association members brought the matter to the attention of the mayor. The mayor subsequently told the president to step down from his position, since he could not even obtain the funds which the association needed. The president resigned from his position, but in the following election he was reelected as one of the association officials.

Our informants also report that in 1962 the association had a court case with a person who claimed ownership of the area where the system's dam is located. This case was finally settled out of court. However, we were not able to obtain information as to how the case was resolved.

Rituals Practiced in the System

One of the distinguishing characteristics of this system is that the farmers observe rituals which are specifically focused on the use of irrigation. One of these rituals is the pamisa (Mass) usually held on the last Friday of March. In 1977, however, the association decided to have the pamisa after Easter. The main reason behind the change of date is that the pamisa involves a feast, a celebration that is not fitting for the fasting associated with Lent.

explain that when the offender is humble enough and asks for a reconsideration, they have to be considerate too. However, if the offender is hardheaded or arrogant, the officials usually refer the case to the local police. If the farmer still refuses to pay, the officials resort to water deprivation.

In the pamisa, a Mass is said by a Catholic priest at the dam site. The mass is in honor of the Blessed Mary (Santa Maria), the spiritual patron of the community. However, the pamisa is also an occasion when the farmers using the system make a food offering (atang). After the mass, an animal (a pig, cow, or goat) is butchered at the dam site and its blood is spilled on the dam. The activity is called the padara (literally, to bleed). After the padara ceremonies, the butchered animal is cooked and eaten by the association members and the other people who are present at the occasion. The members also bring other food and drinks, hence the pamisa becomes a festive occasion. The pamisa usually precedes the general cleaning and repair of the system which last for about a month.

The other ritual observed in this system is the paayos (literally, to allow to flow). The paayos usually occurs in June. For this occasion, the blood of a newly-killed animal is poured at the area of the system's pakama (an obstruction made of bamboo twigs, other branches, mud, and stones that is placed close to the system's headgate). Subsequently, the pakama is removed and the water is released. One of the farmers runs with the flow of water and he pours the blood of the butchered animal along the way until just before the canal enters the first fields in the system. As in the pamisa, the butchered animal is cooked and eaten by the people who participate in the occasion, along with the food and drinks which they have brought. The paayos is made known to the farmers by a drummer who goes around the residential area early in the morning of the day when the ritual is to be conducted.

Our informants explain that both the pamisa and the paayos are held as an offering to the Blessed Mary. Specifically, the farmers hope that through the offering they will obtain a good harvest. However, the festivities are also held to honor the deceased persons who constructed the system. "Our way of remembering them," as an informant puts it.